

SEQUENCE LISTING

<110> David M. Knipe
Travis J. Taylor
Elizabeth McNamee

<120> Replication-Competent Virus Expressing A Fusion Protein

<130> HU98-05

<140> 09/127,227

<141> 1998-07-31

<160> 5

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 4359

<212> DNA

<213> herpesvirus

<220>

<221> CDS

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48

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ccc ctg gga tac gtg tac gct cgc gcg tgt ccg tcc gaa ggc atc gag
Pro Leu Gly Tyr Val Tyr Ala Arg Ala Cys Pro Ser Glu Gly Ile Glu
20          25          30

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95

ctt ctg gcg tta ctg tcg gcg cgc agc ggc gat gcc gac gtc gcc gtg
 Leu Leu Ala Leu Leu Ser Ala Arg Ser Gly Asp Ala Asp Val Ala Val
 35 40 45

144

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gcg ccc ctg gtc gtg ggc ctg acc gtg gag agc ggc ttt gag gcc aac
Ala Pro Leu Val Val Gly Leu Thr Val Glu Ser Gly Phe Glu Ala Asn
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192

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gta gcc gtg gtc gtg ggt tct cgc acg acg ggg ctc ggg ggt acc gcg
Val Ala Val Val Val Gly Ser Arg Thr Thr Gly Leu Gly Gly Thr Ala
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340

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 Val Ser Leu Lys Leu Thr Pro Ser His Tyr Ser Ser Ser Val Tyr Val
 85 90 95

389

ttt cac ggc ggc cg ^g cac ctg gac ccc agc acc cag gcc cca aac ctg	336
Phe His Gly Gly Arg His Leu Asp Pro Ser Thr Gln Ala Pro Asn Leu	
100 105 110	
acg cga ctc tgc gag cg ^g gca cg ^c cg ^c cat ttt ggc ttt tcg gac tac	384
Thr Arg Leu Cys Glu Arg Ala Arg His Phe Gly Phe Ser Asp Tyr	
115 120 125	
acc ccc cg ^g ccc ggc gac ctc aaa cac gag acg acg ggg gag g ^c g ^c ctg	432
Thr Pro Arg Pro Gly Asp Leu Lys His Glu Thr Thr Gly Glu Ala Leu	
130 135 140	
tgt gag cg ^c ctc ggc ctg gac cg ^g gac cg ^c gcc ctc ctg tat ctg gtc	480
Cys Glu Arg Leu Gly Leu Asp Pro Asp Arg Ala Leu Leu Tyr Leu Val	
145 150 155 160	
gtt acc gag ggc ttc aag gag g ^c gtg tgc atc aac aac acc ttt ctg	528
Val Thr Glu Gly Phe Lys Glu Ala Val Cys Ile Asn Asn Thr Phe Leu	
165 170 175	
cac ctg gga ggc tcg gac aag gta acc ata ggc ggg g ^c g ^c gag gtg cac	576
His Leu Gly Gly Ser Asp Lys Val Thr Ile Gly Gly Ala Glu Val His	
180 185 190	
cg ^c ata ccc gtg tat ccg ttg cag ctg ttc atg ccg gat ttt agc cg ^g	624
Arg Ile Pro Val Tyr Pro Leu Gln Leu Phe Met Pro Asp Phe Ser Arg	
195 200 205	
gt ^c atc gcc gag ccg ttc aac gcc aac cac cg ^a tcg atc ggg gag aat	672
Val Ile Ala Glu Pro Phe Asn Ala Asn His Arg Ser Ile Gly Glu Asn	
210 215 220	
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Phe Thr Tyr Pro Leu Pro Phe Phe Asn Arg Pro Leu Asn Arg Leu Leu	
225 230 235 240	
ttc gag gc ^c gtc gtg gga ccc gcc g ^c gtg gca ctg cga tgc cga aac	768
Phe Glu Ala Val Val Gly Pro Ala Ala Val Ala Leu Arg Cys Arg Asn	
245 250 255	
gt ^c gac gcc gtg gcc cg ^c g ^c g ^c gcc cac ctg g ^c ttt gac gaa aac	816
Val Asp Ala Val Ala Arg Ala Ala His Leu Ala Phe Asp Glu Asn	
260 265 270	
cac gag ggc gcc ctc ccc gcc gac att acg ttc acg gcc ttc gaa	864
His Glu Gly Ala Ala Leu Pro Ala Asp Ile Thr Phe Thr Ala Phe Glu	
275 280 285	
gcc agc cag ggt aag acc ccg cg ^c ggt ggg cg ^c gac ggc ggc aag	912
Ala Ser Gln Gly Lys Thr Pro Arg Gly Gly Arg Asp Gly Gly Gly Lys	
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ggc ccg gcg ggc ggg ttc gaa cag cg ^c ctg gcc tcc gtc atg gcc gga	960

Gly	Pro	Ala	Gly	Gly	Phe	Glu	Gln	Arg	Leu	Ala	Ser	Val	Met	Ala	Gly	
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Asp	Ala	Ala	Leu	Ala	Leu	Glu	Ser	Ile	Val	Ser	Met	Ala	Val	Phe	Asp	
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gag	ccg	ccc	acc	gac	atc	tcc	gcg	tgg	ccg	ctg	tgc	gag	ggc	cag	gac	1056
Glu	Pro	Pro	Thr	Asp	Ile	Ser	Ala	Trp	Pro	Leu	Cys	Glu	Gly	Gln	Asp	
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Thr	Ala	Ala	Ala	Arg	Ala	Asn	Ala	Val	Gly	Ala	Tyr	Leu	Ala	Arg	Ala	
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gcg	gga	ctc	gtg	ggg	gcc	atg	gta	ttt	agc	acc	aac	tcg	gcc	ctc	cat	1152
Ala	Gly	Leu	Val	Gly	Ala	Met	Val	Phe	Ser	Thr	Asn	Ser	Ala	Leu	His	
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ctc	acc	gag	gtg	gac	gac	gcc	ggt	ccg	gcg	gac	cca	aag	gac	cac	agc	1200
Leu	Thr	Glu	Val	Asp	Asp	Ala	Gly	Pro	Ala	Asp	Pro	Lys	Asp	His	Ser	
					385				390					400		
aaa	ccc	tcc	ttt	tac	cgc	ttc	ctc	gtg	ccc	ggg	acc	cac	gtg	gcg		1248
Lys	Pro	Ser	Phe	Tyr	Arg	Phe	Phe	Leu	Val	Pro	Gly	Thr	His	Val	Ala	
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gcc	aac	cca	cag	gtg	gac	cgc	gag	gga	cac	gtg	gtg	ccc	ggg	ttc	gag	1296
Ala	Asn	Pro	Gln	Val	Asp	Arg	Glu	Gly	His	Val	Val	Pro	Gly	Phe	Glu	
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ggg	ccg	ccc	acc	gcg	ccc	ctc	gtc	ggc	gga	acc	cag	gaa	ttt	gcc	ggc	1344
Gly	Arg	Pro	Thr	Ala	Pro	Leu	Val	Gly	Gly	Thr	Gln	Glu	Phe	Ala	Gly	
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gag	cac	ctg	gcc	atg	ctg	tgt	ggg	ttt	tcc	ccg	gcg	ctg	ctg	gcc	aag	1392
Glu	His	Leu	Ala	Met	Leu	Cys	Gly	Phe	Ser	Pro	Ala	Leu	Leu	Ala	Lys	
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Met	Leu	Phe	Tyr	Leu	Glu	Arg	Cys	Asp	Gly	Gly	Val	Ile	Val	Gly	Arg	
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cag	gag	atg	gac	gtg	ttt	cga	tac	gtc	gcg	gac	tcc	aac	cag	acc	gac	1488
Gln	Glu	Met	Asp	Val	Phe	Arg	Tyr	Val	Ala	Asp	Ser	Asn	Gln	Thr	Asp	
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gtg	ccc	tgc	aac	ctg	tgc	acc	ttc	gac	acg	cgc	cac	gcc	tgc	gta	cac	1536
Val	Pro	Cys	Asn	Leu	Cys	Thr	Phe	Asp	Thr	Arg	His	Ala	Cys	Val	His	
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Thr	Thr	Leu	Met	Arg	Leu	Arg	Ala	Arg	His	Pro	Lys	Phe	Ala	Ser	Ala	

515

520

525

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Asp	Cys	Asp	Val	Leu	Gly	Asn	Tyr	Ala	Ala	Phe	Ser	Ala	Leu	Lys	Arg	
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Asn	Arg	Glu	Ala	Leu	His	Thr	Val	Val	Asn	Asn	Val	Arg	Gln	Val	Val	
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Asp	Arg	Glu	Val	Glu	Gln	Leu	Met	Arg	Asn	Leu	Val	Glu	Gly	Arg	Asn	
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Phe	Lys	Phe	Arg	Asp	Gly	Leu	Gly	Glu	Ala	Asn	His	Ala	Met	Ser	Leu	
645					650				655							
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Thr	Leu	Asp	Pro	Tyr	Ala	Cys	Gly	Pro	Cys	Pro	Leu	Leu	Gln	Leu	Leu	
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Gly	Arg	Arg	Ser	Asn	Leu	Ala	Val	Tyr	Gln	Asp	Leu	Ala	Leu	Ser	Gln	
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Cys	His	Gly	Val	Phe	Ala	Gly	Gln	Ser	Val	Glu	Gly	Arg	Asn	Phe	Arg	
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Asn	Gln	Phe	Gln	Pro	Val	Leu	Arg	Arg	Arg	Val	Met	Asp	Met	Phe	Asn	
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Asn	Gly	Phe	Leu	Ser	Ala	Lys	Thr	Leu	Thr	Val	Ala	Leu	Ser	Glu	Gly	
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gag agc agc ttc gag ggc gac gtt gcc cgc gtg acc ctg ggg ttt ccc Glu Ser Ser Phe Glu Gly Asp Val Ala Arg Val Thr Leu Gly Phe Pro 755 760 765	2304
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taa cag aag ccc gac aag cgc gtg gac atc ctc ctc gga ccg ctg ggc Tyr Gln Lys Pro Asp Lys Arg Val Asp Ile Leu Leu Gly Pro Leu Gly 805 810 815	2448
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ccg ggg tcc aac cag ccg aac ccg cag tgg ttc tgg acg gcc ctc caa Pro Gly Ser Asn Gln Pro Asn Pro Gln Trp Phe Trp Thr Ala Leu Gln 835 840 845	2544
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950										955						
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Ser																
Met	Phe	Ala	Ser	Cys	Asn	Leu	Leu	Arg	Pro	Val	Met	Ala	Ala	Arg		
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Pro	Met	Val	Val	Leu	Gly	Leu	Ser	Ile	Ser	Lys	Tyr	Tyr	Gly	Met	Ala	
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Gly																
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Gly																
Lys	Asn	Ala	Cys	Pro	Leu	Leu	Ile	Phe	Asp	Arg	Thr	Arg	Lys	Phe		
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gtc	ctg	gcc	tgt	ccc	cgg	gcc	ggg	ttt	gtg	tgc	gac	ttc	tcg	aac	ctc	3120
Val																
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Ille																
Ser	Glu	Gly	Gly	Ala	Ala	Val	Ala	Ser	Ser	Val	Phe	Val	Ala	Thr		
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gtg	aaa	agc	ctg	ggg	ccc	cgc	acc	cag	cag	ctg	cag	atc	gag	gac	tgg	3264
Val	Lys	Ser	Leu	Gly	Pro	Arg	Thr	Gln	Gln	Leu	Gln	Ile	Glu	Asp	Trp	
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Leu	Ala	Leu	Leu	Glu	Asp	Glu	Tyr	Leu	Ser	Glu	Glu	Met	Met	Glu	Leu	
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acc	gac	cgt	gcc	ctg	gag	cgc	ggc	aac	ggc	gag	tgg	tgc	acg	gac	ggc	3360
Thr	Ala	Arg	Ala	Leu	Glu	Arg	Gly	Asn	Gly	Glu	Trp	Ser	Thr	Asp	Ala	
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gcc	ctg	gag	gtg	gac	cac	gag	gcc	cta	gtc	agc	caa	ctc	ggc		3408	
Ala	Leu	Glu	Val	Ala	His	Glu	Ala	Glu	Ala	Leu	Val	Ser	Gln	Leu	Gly	
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aac	gcc	ggg	gag	gtg	ttt	aac	ttt	ggg	gat	ttt	ggc	tgc	gag	gac	ggc	3456
Asn	Ala	Gly	Glu	Val	Phe	Asn	Phe	Gly	Asp	Phe	Gly	Cys	Glu	Asp	Asp	
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aac	gac	acg	ccg	ttc	ggc	ggc	ccg	ggg	gcc	ccg	gca	ttt	gcc		3504	

Asn Ala Thr Pro Phe Gly Gly Pro Gly Ala Pro Gly Pro Ala Phe Ala			
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ggc cgc aaa cgg gcg ttc cac ggg gat gac ccg ttt ggg gag ggg ccc		3552	
Gly Arg Lys Arg Ala Phe His Gly Asp Asp Pro Phe Gly Glu Gly Pro			
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ccc gac aaa aag gga gac ctg acg ttg gat atg ctg aga ggg gtt ggg		3600	
Pro Asp Lys Lys Gly Asp Leu Thr Leu Asp Met Leu Arg Gly Val Gly			
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Gly Trp Gly Asn Leu Glu Ser Thr Arg Ala Ala Ala Ala Thr Met Ser			
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aag ggc gag gaa ctg ttc act ggc gtg gtc cca att ctc gtg gaa ctg		3696	
Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu Leu			
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Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly Glu			
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Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr Thr			
1250	1255	1260	
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Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe Thr Tyr			
1265	1270	1275	1280
ggc gtg cag tgc ttt tcc aga tac cca gac cat atg aag cag cat gac		3888	
Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His Asp			
1285	1290	1295	
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Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr Ile			
1300	1305	1310	
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1315	1320	1325	
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Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp Phe			
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Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr Asn			
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tcc cac aat gtg tac atc atg gcc gac aag caa aag aat ggc atc aag		4128	
Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile Lys			

1365	1370	1375	
gtc aac ttc aag atc aga cac aac att gag gat gga tcc gtg cag ctg Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln Leu 1380	1385	1390	4176
gcc gac cat tat caa cag aac act cca atc ggc gac ggc cct gtg ctc Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val Leu 1395	1400	1405	4224
ctc cca gac aac cat tac ctg tcc acc cag tct gcc ctg tct aaa gat Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys Asp 1410	1415	1420	4272
ccc aac gaa aag aga gac cac atg gtc ctg ctg gag ttt gtg acc gct Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr Ala 1425	1430	1435	4320
gct ggg atc aca cat ggc atg gac gag ctg tac aag tga Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys *	1445	1450	4359
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Arg Ile Pro Val Tyr Pro Leu Gln Leu Phe Met Pro Asp Phe Ser Arg
 195 200 205
 Val Ile Ala Glu Pro Phe Asn Ala Asn His Arg Ser Ile Gly Glu Asn
 210 215 220
 Phe Thr Tyr Pro Leu Pro Phe Phe Asn Arg Pro Leu Asn Arg Leu Leu
 225 230 235 240
 Phe Glu Ala Val Val Gly Pro Ala Ala Val Ala Leu Arg Cys Arg Asn
 245 250 255
 Val Asp Ala Val Ala Arg Ala Ala His Leu Ala Phe Asp Glu Asn
 260 265 270
 His Glu Gly Ala Ala Leu Pro Ala Asp Ile Thr Phe Thr Ala Phe Glu
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 Ala Ser Gln Gly Lys Thr Pro Arg Gly Gly Arg Asp Gly Gly Gly Lys
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 Gly Pro Ala Gly Gly Phe Glu Gln Arg Leu Ala Ser Val Met Ala Gly
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 Glu Pro Pro Thr Asp Ile Ser Ala Trp Pro Leu Cys Glu Gly Gln Asp
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 Ala Gly Leu Val Gly Ala Met Val Phe Ser Thr Asn Ser Ala Leu His
 370 375 380
 Leu Thr Glu Val Asp Asp Ala Gly Pro Ala Asp Pro Lys Asp His Ser
 385 390 395 400
 Lys Pro Ser Phe Tyr Arg Phe Phe Leu Val Pro Gly Thr His Val Ala
 405 410 415
 Ala Asn Pro Gln Val Asp Arg Glu Gly His Val Val Pro Gly Phe Glu
 420 425 430
 Gly Arg Pro Thr Ala Pro Leu Val Gly Gly Thr Gln Glu Phe Ala Gly
 435 440 445
 Glu His Leu Ala Met Leu Cys Gly Phe Ser Pro Ala Leu Leu Ala Lys
 450 455 460
 Met Leu Phe Tyr Leu Glu Arg Cys Asp Gly Gly Val Ile Val Gly Arg
 465 470 475 480
 Gln Glu Met Asp Val Phe Arg Tyr Val Ala Asp Ser Asn Gln Thr Asp
 485 490 495
 Val Pro Cys Asn Leu Cys Thr Phe Asp Thr Arg His Ala Cys Val His
 500 505 510
 Thr Thr Leu Met Arg Leu Arg Ala Arg His Pro Lys Phe Ala Ser Ala
 515 520 525
 Ala Arg Gly Ala Ile Gly Val Phe Gly Thr Met Asn Ser Met Tyr Ser
 530 535 540
 Asp Cys Asp Val Leu Gly Asn Tyr Ala Ala Phe Ser Ala Leu Lys Arg
 545 550 555 560
 Ala Asp Gly Ser Glu Thr Ala Arg Thr Ile Met Gln Glu Thr Tyr Arg
 565 570 575
 Ala Ala Thr Glu Arg Val Met Ala Glu Leu Glu Thr Leu Gln Tyr Val
 580 585 590
 Asp Gln Ala Val Pro Thr Ala Met Gly Arg Leu Glu Thr Ile Ile Thr
 595 600 605
 Asn Arg Glu Ala Leu His Thr Val Val Asn Asn Val Arg Gln Val Val

610	615	620	
Asp Arg Glu Val Glu Gln Leu Met Arg Asn Leu Val	Glu Gly Arg Asn		
625	630	635	
Phe Lys Phe Arg Asp Gly Leu Gly Glu Ala Asn His	Ala Met Ser Leu	640	
645	650	655	
Thr Leu Asp Pro Tyr Ala Cys Gly Pro Cys Pro Leu	Leu Gln Leu Leu		
660	665	670	
Gly Arg Arg Ser Asn Leu Ala Val Tyr Gln Asp Leu	Ala Leu Ser Gln		
675	680	685	
Cys His Gly Val Phe Ala Gly Gln Ser Val Glu	Gly Arg Asn Phe Arg		
690	695	700	
Asn Gln Phe Gln Pro Val Leu Arg Arg Arg Val	Met Asp Met Phe Asn		
705	710	715	720
Asn Gly Phe Leu Ser Ala Lys Thr Leu Thr Val	Ala Leu Ser Glu Gly		
725	730	735	
Ala Ala Ile Cys Ala Pro Ser Leu Thr Ala Gly	Gln Thr Ala Pro Ala		
740	745	750	
Glu Ser Ser Phe Glu Gly Asp Val Ala Arg Val	Thr Leu Gly Phe Pro		
755	760	765	
Lys Glu Leu Arg Val Lys Ser Arg Val Leu Phe	Ala Gly Ala Ser Ala		
770	775	780	
Asn Ala Ser Glu Ala Ala Lys Ala Arg Val	Ala Ser Leu Gln Ser Ala		
785	790	795	800
Tyr Gln Lys Pro Asp Lys Arg Val Asp Ile	Leu Leu Gly Pro Leu Gly		
805	810	815	
Phe Leu Leu Lys Gln Phe His Ala Ala Ile	Phe Pro Asn Gly Lys Pro		
820	825	830	
Pro Gly Ser Asn Gln Pro Asn Pro Gln Trp	Phe Trp Thr Ala Leu Gln		
835	840	845	
Arg Asn Gln Leu Pro Ala Arg Leu Leu Ser Arg	Glu Asp Ile Glu Thr		
850	855	860	
Ile Ala Phe Ile Lys Lys Phe Ser Leu Asp	Tyr Gly Ala Ile Asn Phe		
865	870	875	880
Ile Asn Leu Ala Pro Asn Asn Val Ser	Glu Leu Ala Met Tyr Tyr Met		
885	890	895	
Ala Asn Gln Ile Leu Arg Tyr Cys Asp His	Ser Thr Tyr Phe Ile Asn		
900	905	910	
Thr Leu Thr Ala Ile Ile Ala Gly Ser Arg Arg	Pro Pro Ser Val Gln		
915	920	925	
Ala Ala Ala Trp Ser Ala Gln Gly Gly Ala	Gly Leu Glu Ala Gly		
930	935	940	
Ala Arg Ala Leu Met Asp Ala Val Asp Ala	His Pro Gly Ala Trp	Thr	
945	950	955	960
Ser Met Phe Ala Ser Cys Asn Leu Leu Arg	Pro Val Met Ala Ala Arg		
965	970	975	
Pro Met Val Val Leu Gly Leu Ser Ile	Ser Lys Tyr Tyr Gly Met Ala		
980	985	990	
Gly Asn Asp Arg Val Phe Gln Ala Gly Asn Trp	Ala Ser Leu Met Gly		
995	1000	1005	
Gly Lys Asn Ala Cys Pro Leu Leu Ile Phe Asp	Arg Thr Arg Lys Phe		
1010	1015	1020	
Val Leu Ala Cys Pro Arg Ala Gly Phe Val	Cys Ala Ala Ser Asn Leu		
1025	1030	1035	1040

Gly Gly Gly Ala His Glu Ser Ser Leu Cys Glu Gln Leu Arg Gly Ile
 1045 1050 1055
 Ile Ser Glu Gly Gly Ala Ala Val Ala Ser Ser Val Phe Val Ala Thr
 1060 1065 1070
 Val Lys Ser Leu Gly Pro Arg Thr Gln Gln Leu Gln Ile Glu Asp Trp
 1075 1080 1085
 Leu Ala Leu Leu Glu Asp Glu Tyr Leu Ser Glu Glu Met Met Glu Leu
 1090 1095 1100
 Thr Ala Arg Ala Leu Glu Arg Gly Asn Gly Glu Trp Ser Thr Asp Ala
 1105 1110 1115 1120
 Ala Leu Glu Val Ala His Glu Ala Glu Ala Leu Val Ser Gln Leu Gly
 1125 1130 1135
 Asn Ala Gly Glu Val Phe Asn Phe Gly Asp Phe Gly Cys Glu Asp Asp
 1140 1145 1150
 Asn Ala Thr Pro Phe Gly Gly Pro Gly Ala Pro Gly Pro Ala Phe Ala
 1155 1160 1165
 Gly Arg Lys Arg Ala Phe His Gly Asp Asp Pro Phe Gly Glu Gly Pro
 1170 1175 1180
 Pro Asp Lys Lys Gly Asp Leu Thr Leu Asp Met Leu Arg Gly Val Gly
 1185 1190 1195 1200
 Gly Trp Gly Asn Leu Glu Ser Thr Arg Ala Ala Ala Ala Thr Met Ser
 1205 1210 1215
 Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu Leu
 1220 1225 1230
 Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly Glu
 1235 1240 1245
 Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr Thr
 1250 1255 1260
 Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe Thr Tyr
 1265 1270 1275 1280
 Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His Asp
 1285 1290 1295
 Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr Ile
 1300 1305 1310
 Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys Phe
 1315 1320 1325
 Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp Phe
 1330 1335 1340
 Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr Asn
 1345 1350 1355 1360
 Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile Lys
 1365 1370 1375
 Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln Leu
 1380 1385 1390
 Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val Leu
 1395 1400 1405
 Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys Asp
 1410 1415 1420
 Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr Ala
 1425 1430 1435 1440
 Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
 1445 1450

<210> 3
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> a sense molecule used to modify the stop codon

<400> 3
caacccctct cagcatatcc aacg 24

<210> 4
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> an anti-sense molecule used to modify the stop codon

<400> 4
cgttggatat gctgagaggg gttg 24

<210> 5
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide linker

<400> 5
ggaagatctt cc 12